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ABSTRACT

This report describes the main field test of Minicourse 18: Teaching Reading as Decoding. The purposes of the main field test were: (1) to evaluate the effects of the course on the participating teachers, (2) to evaluate four reteach treatments on teacher skill acquisition, (3) to compare scores for central city and suburban teachers, and (4) to measure effects of the course on reading achievement of pupils. Fifty-six teachers participated in the study from both central city and suburban schools. Most of the teachers taught in the primary grades. Three major conclusions of this report were: (1) Minicourse 18 was effective in changing teacher behavior, (2) no significant difference was found in reteaching, and (3) central city and suburban teachers did not differ in pre and post scores. The pupil achievement tests were administered as a follow-up to the main field test. Those scores will be contained in the Follow-Up Study Report. Appendix includes the 18 minicourse lessons and tally sheets of the decoding skills. (TB)

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MINICOURSE 18

Main Field Test Report

September, 1972

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Far West Laboratory
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Minicourse 18 Main Field Test Report

TABLE OF CONTENTS

	Page
Introduction to the Report	1
Purposes of the Main Field Test	1
Test Hypotheses	1
Terminology	3
Relevant Research	3
Treatment	4
Population Description	5
Data Sources	7
Data Analysis	8
Results	9
Conclusions	22
Educational Significance	24
Appendices	26
Pre-post lesson instructions	27
Lesson critique sheets and instructions	29

INTRODUCTION TO THE REPORT

This report describes the main field test of Minicourse 18: Teaching Reading as Decoding. It is written for members of the Teacher Education Division of the Far West Laboratory for Educational Research and Development, for interested staff members in other Laboratory divisions, and for reviewers in general.

PURPOSES OF THE MAIN FIELD TEST

The main field test was conducted for the following purposes:

1. To evaluate the effects of the course upon the demonstrated teaching skill of participating teachers.
2. To compare four reteach treatments for their influence on teacher skill acquisition.
3. To compare entry scores and exit scores for central city and suburban teachers.
4. To measure effects of Minicourse 18 teaching skills upon the reading achievement of pupils.

TEST HYPOTHESES

The statistical hypotheses tested were related to the purposes of the study. They were stated in null form for performing statistical tests. Here they are stated as research hypotheses.

Hypothesis 1, Re.: Teacher Performance

Means of teacher behaviors scored on precourse lesson tapes will be significantly better than means of teacher behaviors scored on postcourse lesson tapes.

Hypothesis 2, Re.: Reteach Effect

There will be no significant differences among the postcourse teacher scores, adjusted for covariates, for any of the four reteach treatments.

Hypothesis 3, Re.: Location Differences

There will be no significant differences between the entry scores of central city and suburban teachers, nor between the exit scores of central city and suburban teachers.

Hypothesis 4, Re.: Pupil Performance

Reading achievement of pupils of Minicourse 18 teachers will be better than for pupils of non-Minicourse 18 teachers, when tested with standardized and laboratory-developed tests.

This paper will report the data relative to the first three hypotheses. The pupil tests used to test the fourth hypothesis were administered as a part of a follow-up to the main field test. Those data will be reported in the Follow-Up Study Report.

Findings of a study conducted by Darryl Strickler, then of the University of Buffalo and now at Alfred University, New York, also relate to these hypotheses. The report of the study may be found in his doctoral dissertation, Teacher Behavior and Pupil Performance Related to a Training Program for In-Service and Preservice Teachers Based Upon Minicourse Eighteen: Teaching Reading as Decoding. The dissertation was approved in May, 1972.

TERMINOLOGY

This report uses three words with definitions specific to the course.

decoding: The association of the sounds of spoken language (phonemes) with the letters which represent them (graphemes), demonstrated by the pronunciation of words or word parts.

reading: The two-part process of decoding and comprehending written material. Minicourse 18 primarily deals with the decoding aspect.

reteach: A repetition of a prior lesson, or an adaptation of it to stress certain parts of the lessor or certain aspects of a teaching skill.

RELEVANT RESEARCH

The literature on teaching reading as decoding was reviewed prior to the design of the course. Minicourse 18 was developed on the basis

of this literature review. A total of more than 187 studies and articles was reviewed. Generally, the teaching skills in the course are a composite of treatment characteristics that resulted in significant differences in pupil learning. Persons wishing to read about the relevant research are referred to the first section of each of the five chapters in the teacher handbook for the course, to the original course proposal, and to the literature review itself.

TREATMENT

All of the teachers who participated in this test were trained in the skills of Minicourse 18. Participation included (1) reading the teacher handbook; (2) viewing instructional and model tapes; (3) planning, conducting, videotaping microteach lessons; and (4) self-evaluating the microteach lessons.

There were four reteach treatments: no reteach, reteach, combination, and mastery.

1. Reteach -- these teachers taught each lesson a second time. No review lesson was taught.
2. Combination -- these teachers retaught in Sequences 1, 4, and 5. They also taught a review lesson.
3. Mastery -- teachers were provided evaluative information so that they could determine whether their performance reached a desired level of performance. The teacher could reteach as many times as desired. No review lesson was taught.

4. No reteach -- the teachers in this treatment taught only the micro-teach lessons outlined for each sequence. Between the fourth and fifth sequences they taught a review lesson in which they applied the skills from the first four sequences.

POPULATION DESCRIPTION

The test population consisted of 56 participating teachers, most of whom taught in the primary grades (1-3). The teachers were in central city and suburban schools, as shown in Table 1.

Three of the sites (Montgomery County; Washington, D.C.; and Chicago) had less coordination than is usual for a main field test; therefore they serve as both main field test and operational field test samples.

TABLE 1

DESCRIPTION OF THE SAMPLE BY LOCATION

Central City		Suburban	
Chicago	14	Montgomery Co., Md.	19
Washington, D.C.	11	San Lorenzo, Ca.	12
	Total = 56		

The reteach (teaching a lesson a second time) treatment was randomly assigned by school. Originally 15 teachers were assigned to all treatments. However, one school from the reteach population withdrew prior to the commencement of training due to problems of equipment utilization. The reteach population was increased when an additional school asked to participate and the random assignment fell in that category. Other sample differences are the result of attrition.

TABLE 2

DESCRIPTION OF THE SAMPLE BY ASSIGNMENT TO RETEACH TREATMENT

Treatment	N
1. Reteach all lessons	8
2. Reteach for some lessons	14
3. Teach to mastery	12
4. No reteach	22
	56

DATA SOURCES

Data on teacher behavioral changes were gathered on pre-post videotapes of reading lessons. The pre-post lessons were 30 minutes in length. Teachers were given lesson outlines for the pre- and post-tapes. To control for any bias in the use of the course behaviors that might result from the specific words included in the lists for each lesson, one-half the teachers (Group A) used one form for the pretaped lessons; the other half (Group B) used an alternate form. For the post-taped lessons, the forms were reversed. The forms were assigned randomly for the precourse lesson. See Table 3 for explanation.

TABLE 3

ASSIGNMENT OF LESSON CONTENT

	Precourse	Postcourse
Group A	Word List A	Word List B
Group B	Word List B	Word List A

Behaviors displayed on each tape were tallied by two independent critiquers. The fifty behaviors are clustered into eight major areas, so each tape is viewed sixteen times. (Copies of the eight critique sheets and the directions which accompanied them are in the appendix.)

Teacher opinion or assessment of Minicourse 18 was measured by a questionnaire. The questionnaire asked for information on the grade level and experience of the teachers and on whether or not they had volunteered to take the course. Most of the questions dealt with rating the various parts of the course.

DATA ANALYSIS

The overall behavior changes from the pre-post lessons were analyzed by using the NYBMUL Multivariance computer program to establish univariate F ratios and significance levels for the grand means. Those behaviors not differing significantly were analyzed further with the Ariel t-test Program for correlated Means, in order to identify pre-post differences within each treatment.

The effect of the reteach treatments was analyzed initially by using the NYBMUL Multivariance program to perform an analysis of covariance on the post-scores, using the pre-scores as covariates. Then a comparison of the effects of the reteach treatments for those behaviors was made, using the adjusted (by covariance) scores and a Scheffé contrast computer program written by Morris Lai. (Scheffé contrasts were used instead of Tukey's because of unequal cell size.)

In order to compare entry scores and exit scores for central city and suburban teachers, one-way analysis of variance tests were run first on the entry scores (precourse lesson scores). The precourse mean of central city teachers on each behavior was compared with the mean of suburban teachers on that behavior. Then a covariance analysis was applied to those scores differing significantly. Finally, a one-way analysis of variance test was run on those exit scores (postcourse lesson scores) not differing significantly in the pre-test scores in order to determine significant differences between those scores for central city and suburban teachers.

RESULTS

Overall Teacher Performance

The results of the analysis of teacher behavior change as recorded in the pre- and postcourse lessons are shown in the grand means reported in Table 4.

The behaviors are divided into two groups: behaviors where increase was considered desirable (top 22 items), and behaviors where decrease was considered desirable (items 23-29).

The first two teaching skill categories, grapheme recognition and grapheme/phoneme correspondence, showed significant increases in all seven behaviors in the postcourse means.

The third category, grapheme/phoneme correspondence for larger letter units, showed increase in all behaviors except teacher use of similar spelling patterns in presenting words. This showed that teachers already used that skill prior to taking Minicourse 18. The increases in the performance in this area were statistically significant for only two of the behaviors, teacher use of contrasting spelling patterns and discussing affix meaning.

The following three skill categories, using contextual clues in decoding, teacher response to pupil error, and use of transfer activities showed significant changes.

All except one of the behaviors considered negative decreased significantly, with some showing dramatic changes. The non-significant change was in the behavior of a teacher moving to another pupil without helping the first pupil to correct his error.

TABLE 2

GRAND MEAN CHANGES IN PRE-POST BEHAVIOR FROM THE MAIN FIELD TEST OF MINICOURSE 18

(N = 56)

	Behavior Compared	Pre-tape Mean	S.D.	Post-tape Mean	S.D.	F
	Increase considered desirable					
a	1. Matches letter	.32	.86	2.79	2.05	69.29**
a	2. Describes letter	.43	.95	1.23	.87	20.97**
a	3. Finds letter without clues	.16	.71	.89	1.29	12.60**
a	4. Tells letter location	.63	2.28	4.16	4.36	35.92**
b	5. Says and shows word	5.27	6.67	16.77	12.18	42.18**
b	6. Writes and says pupil's word	2.55	4.57	5.11	5.74	6.74*
b	7. Teaches letter variability	1.23	2.92	7.36	6.56	43.34**
c	8. Uses similar spelling pattern (T)	1.29	.97	1.27	.80	.01
c	9. Uses similar spelling pattern (P)	.95	.88	1.04	.79	.39
c	10. Uses contrasting spelling pattern (T)	1.75	1.31	2.38	1.34	6.36*
c	11. Uses contrasting spelling pattern (P)	1.45	1.22	1.80	1.33	2.13
c	12. Presents affixes together	.66	.58	.84	.68	1.88
c	13. Discusses affix meaning	.61	.78	1.16	1.30	7.27**
d	14. Arranges sentence	1.11	1.42	1.64	1.52	4.97**
d	15. Substitutes sentence word	.04	.19	.20	2.45	12.99**
d	16. Questions word substituted	.02	.13	.54	1.39	7.65**
d	17. Teaches homograph duality	.23	.69	1.64	2.17	23.26**
e	18. Returns to review word	.32	.64	1.02	1.61	8.04**
e	19. Compares with target word	.04	.19	.70	1.61	9.17**
f	20. Asks how or why	1.11	1.96	3.68	3.50	22.79**
f	21. Word one letter different	8.38	5.49	11.55	9.12	4.65*
f	22 Word from previous parts	1.59	1.41	2.86	2.58	10.17**
	Decrease considered desirable					
e	23. Ignores	.84	1.25	.36	.98	4.97*
e	24. Moves to other pupil	.61	1.07	.55	.99	.07
a	25. Names letter	67.98	42.18	35.95	38.81	52.64**
b	26. "Sound says"	8.57	7.25	1.32	1.57	60.53**
b	27. Isolates phoneme (T)	17.89	11.62	1.07	2.83	128.88**
b	28. Isolates phoneme (P)	16.05	15.74	.96	2.61	59.24**
b	29. Pronounces unnaturally	16.16	14.08	3.25	5.41	55.78**

T = Teacher
P = Pupil

*p < .05
**p < .01

a = Grapheme Recognition
b = Grapheme/Phoneme Correspondence
c = Larger Letter Units, G/P Correspondence
d = Contextual Clues
e = Response to Error
f = Transfer

When the five behaviors which did not show significant change were analyzed further, significant pre-post changes were found within reteach treatments for three of the behaviors (See Table 5). The three behaviors showing significant pre-post changes for the All Reteach or Some Reteach Treatments were pupil use of similar spelling pattern, pupil use of contrasting spelling pattern, and teacher presentation of affixes together.

Reteach Treatment

When the scores of the behaviors for each reteach treatment were analyzed for covariance, using the pre-scores as covariates, significant differences were found in the means of the following five behaviors: (See Table 6.)

Tell letter location
Use similar spelling pattern (T)
Use similar spelling pattern (P)
Word from various parts
Name letter (negative)

The five behaviors were then compared by reteach treatment through the use of Scheffé contrasts. (See Table 7.)

TABLE 5

RETEACH TREATMENT EFFECTS FOR BEHAVIORS
WHOSE GRAND MEANS DID NOT SIGNIFICANTLY DIFFER

Behavior	T	Pre-tape Mean	S.D.	Post-tape Mean	S.D.	t
Increase Considered Desirable						
Use similar spelling pattern (T)	All	1.63	.74	2.13	.84	1.87
	Some	.93	1.21	1.14	.86	.48
	TC	1.25	.97	1.00	.60	-.76
	No	1.41	.85	1.18	.66	-.93
Use similar spelling pattern (P)	All	1.13	.99	1.75	1.04	3.42*
	Some	.86	1.03	.86	.77	0.
	TC	.58	.67	.67	.49	.32
	No	1.14	.83	1.09	.68	-.21
Use contrasting spelling pattern (P)	All	1.25	.89	2.25	.89	2.37*
	Some	.86	1.23	2.21	1.63	2.30*
	TC	.58	.67	.67	.49	.32
	No	1.14	.83	1.09	.68	-.21
Present affixes together	All	.88	.35	.75	.46	-1.00
	Some	.29	.47	1.14	.86	2.75*
	TC	.83	.39	.83	.39	0.
	No	.73	.70	.68	.72	-.20
Decrease Considered Desirable						
Move to other pupil	All	0.	0.	1.13	1.55	2.05
	Some	1.07	1.49	.50	1.09	-1.20
	TC	.33	.49	.25	.45	-.43
	No	.68	1.09	.55	.86	-.45

T = Treatment
All = Reteach all Lessons
Some = Reteach Some Lessons
TC = Teach to Criterion
No = No Reteach

*$p < .05$

TABLE 6

RETEACH TREATMENT MEANS WHOSE PRESCORES DIFFERED SIGNIFICANTLY

BEHAVIOR COMPARED	PRESCORES BY RETEACH TREATMENTS				p
	1	2	3	4	
Tell letter location	.25	1.50	0.00	.55	.002
Use similar spelling pattern (T)	1.63	.93	1.25	1.41	.007
Use similar spelling pattern (P)	1.13	.86	.58	1.14	.025
Word from previous parts	1.75	1.00	2.08	1.64	.032
Name letter (neg.)	73.75	66.00	93.67	53.14	.004

Reteach Treatments

* $p<.05$

1 - Reteach all lessons
2 - Reteach some lessons
3 - Teach to mastery
4 - No reteach

TABLE 7

BEHAVIORS DIFFERING SIGNIFICANTLY BY RETEACH TREATMENT
(Adjusted post means using prescores as covariates)

BEHAVIOR	RETEACH TREATMENT								F	P
	ALL		SOME		MASTERY		NO			
	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.		
Tell letter location	8.94	5.50	2.75	4.14	4.83	4.03	2.88	3.21	5.69	.002
Use similar spelling pattern (T)	2.15	.83	1.12	.86	1.00	.60	1.19	.66	4.50	.007
Use similar spelling pattern (P)	1.73	1.04	.86	.77	.70	.49	1.07	.68	3.40	.025
Word from previous parts	3.48	2.14	4.43	3.15	1.78	1.90	2.23	2.27	3.16	.032
Name letter (neg.)	65.29	45.06	46.00	57.03	22.80	23.71	31.95	17.70	5.02	.004

A field test coordinator noted that most teachers used the criterion treatment as a no reteach treatment. When the decision to reteach was left to them, most opted not to reteach, because of pressures of time. Thus the criterion group may be judged to be similar to the no reteach group.

In the tell letter location behavior, the all reteach group was much higher than any of the others. This is a peculiar finding, because the teachers in the some reteach group retaught this skill just as did those in the all reteach group. We are, therefore, led to believe that some other variable may be working here. The significant contrasts are those comparing the all reteach group with the some or no groups, as shown in Table 8.

TABLE 8

CONTRASTS FOR EFFECT OF RETEACH TREATMENT UPON TELLING LETTER LOCATION

COMPARISON	LOWER LIMIT	UPPER LIMIT	DECISION
Some vs. no	- 3.9	3.6	NS
Some vs. all	-11.1	-1.3	*
Some vs. mastery	- 6.4	2.3	NS
No vs. all	-10.6	-1.5	*
No vs. mastery	- 5.9	2.0	NS
All vs. mastery	- .9	9.1	NS

The all reteach group performed significantly better than any of the other three reteach groups in the second behavior listed, use of similar spelling pattern by teachers, using Scheffé contrasts. See Table 9.

TABLE 9

CONTRASTS FOR EFFECT OF RETEACH TREATMENT UPON TEACHER'S USE OF SIMILAR SPELLING PATTERN

COMPARISON	LOWER LIMIT	UPPER LIMIT	DECISION
Some vs. no	- .8	.7	NS
Some vs. all	-2.0	- .1	*
Some vs. mastery	- .7	1.0	NS
No vs. all	-1.8	- .1	*
No vs. mastery	- .6	1.0	NS
All vs. mastery	.2	2.1	*

Comparison of the reteach groups for use of similar spelling pattern by pupil showed the all reteach group to differ significantly from the mastery group, as seen in Table 10.

TABLE 10

CONTRASTS FOR EFFECT OF RETEACH TREATMENT UPON PUPIL'S USE OF SIMILAR SPELLING PATTERN

COMPARISON	LOWER LIMIT	UPPER LIMIT	DECISION
Some vs. no	- .9	.5	NS
Some vs. all	-1.8	.1	NS
Some vs. mastery	- .7	1.0	NS
No vs. all	-1.5	.2	NS
No vs. mastery	- .4	1.1	NS
All vs. mastery	.1	2.0	*

No significant pairwise contrast was found between treatments for the behavior of constructing a word from previous parts (See Table 11). Therefore, there must be some complex contrast which is statistically significant.

TABLE 11

CONTRASTS FOR EFFECT OF RETEACH TREATMENT UPON PROVIDING WORDS CONSTRUCTED FROM PREVIOUS PARTS

COMPARISON	LOWER LIMIT	UPPER LIMIT	DECISION
Some vs. no	- .2	4.6	NS
Some vs. all	-2.2	4.1	NS
Some vs. mastery	- .1	5.4	NS
No vs. all	-4.2	1.7	NS
No vs. mastery	-2.1	3.0	NS
All vs. mastery	-1.5	4.9	NS

Comparison of the letter naming behavior by treatment showed that both the no reteach and the criterion treatments were significantly superior to the all reteach treatment, as shown in Table 12. This is one of the behaviors which the course attempted to reduce.

TABLE 12

CONTRASTS FOR EFFECT OF RETEACH TREATMENT UPON LETTER NAMING BY TEACHER

COMPARISON	LOWER LIMIT	UPPER LIMIT	DECISION
Some vs. no	-12.0	40.1	NS
Some vs. all	-53.0	14.4	NS
Some vs. mastery	- 6.7	53.1	NS
No vs. all	-64.7	-1.9	*
No vs. mastery	-18.1	36.4	NS
All vs. mastery	7.8	77.2	*

Central City vs. Suburban Teacher Differences

There were no significant differences between central city and suburban teachers in the great majority of behaviors on either the pre- or the post-scores.

A total of 31 behaviors was initially compiled for analysis. The last two (teacher tells and teacher asks) were omitted from the previous comparisons of behavior change because they were not explicit skills of the course, but implicit in the teaching strategies. They are included here because they point up a difference which will be referred to later.

The pre-scores of central city and suburban teachers did not differ in 27 (or 87%) of the 31 behaviors. The four behaviors which differed significantly are shown in Table 13. The findings favored the suburban teachers, who were higher in the two positive behaviors (use of contrasting spelling patterns by teacher and by pupil) and lower in the two negative behaviors (pupil isolation of letter sound and teacher telling).

TABLE 13

BEHAVIORS IN WHICH PRESCORES OF CENTRAL CITY AND SUBURBAN TEACHERS DIFFERED SIGNIFICANTLY

BEHAVIOR	PRETAPE MEAN	S.D.	PRETAPE MEAN	S.D.	T-RATIO	p
Use of contrasting spelling patterns by teacher	1.32	1.35	2.10	1.19	-2.29	$<.05$
Use of contrasting spelling patterns by pupil	1.04	1.14	1.77	1.20	-2.33	$<.05$
Pupil isolation of letter sound(neg.)	21.56	19.47	11.61	10.26	2.46	$<.05$
Teacher Telling (neg.)	9.40	4.48	6.45	2.67	3.06	$<.01$

Comparison of the post-scores of central city and suburban teachers revealed no significant differences on 26 (84%) of the behaviors. Of the five behaviors on which there were differences, four favored the suburban teachers. They were two positive behaviors: writing and pronouncing a pupil-supplied word, and asking how or why; and two negative behaviors: moving to another pupil and amount of telling by the teacher. The difference which favored the central city teachers was that of returning to a previously presented word when a pupil made an error, which is a positive behavior. See Table 14.

TABLE 14

BEHAVIORS IN WHICH POSTSCORES OF CENTRAL CITY AND SUBURBAN TEACHERS DIFFERED SIGNIFICANTLY

BEHAVIOR	CENTRAL CITY TEACHERS		SUBURBAN TEACHERS		F^1	p
	POSTTAPE MEAN	S.D.	POSTTAPE MEAN	S.D.		
Writes and says pupil's word	3.36	5.91	6.52	5.28	4.44	.040
Treats error by return to review word	1.60	2.12	.55	.81	6.47	.014
Asks how or why	2.48	2.92	4.65	3.67	5.77	.020
Treats error by moving to another pupil (neg.)	.92	1.29	.26	.51	6.85	.012
Teacher Tells (neg.)	7.08	3.53	5.23	2.35	4.21	.045

N = 25 N = 31

[1] First four by analysis of variance, last by covariance.

The data show that central city teachers did more telling (as opposed to asking) than did the suburban teachers on both the pre- and post-scores. This indicates that teacher telling is a behavior which occurs more in central city schools than in suburban schools.

Teacher Opinion of the Course

Responses to a teacher questionnaire distributed after the course revealed that 65% felt that Minicourse 18 was better than their other inservice courses, 35% said that it was on a par with others, and one teacher (2%) evaluated it as being less valuable.

CONCLUSIONS

There are three sets of conclusions for this report, parallel to the three hypotheses for which data were reported and analyzed. These refer to teacher performance, reteach treatment, and central city/suburban teacher differences.

Teacher Performance

The primary purpose of a main field test is to determine whether the course is effective in changing teacher behavior. This test demonstrated that Minicourse 18 is effective in changing teacher behavior. Teacher behavior changed in course-approved directions in 24 out of 29 of the behaviors explicitly taught in the course. For the implications of these data, look in the Educational Significance section at the end of this report.

Reteach Treatment

Developers of Minicourses have questioned the need for including reteach lessons. In this course, the amount of reteaching made no significant difference in 24 out of 29 of the behaviors. It is a coincidence that 24 out of 29 behaviors are reported as changing significantly both in this reteach section and also in the preceding teacher performance section. It happens that two of the five behaviors that did not change are the same in both of the behavior lists. As far as we can determine, this is coincidental. Therefore, it appears that reteaching is not important for the majority of the Minicourse 18 skills. Reteaching did appear to be important, however, in the use of similar spelling patterns by teacher and by pupil. These are behaviors in which the new skills are opposite from the skills usually in the teacher's repertoire, with the old emphasis being on rhyming, whereas the new emphasis is on similar spelling patterns and the corresponding sound patterns.

Central City/Suburban Teacher Differences

The data show that, for Minicourse 18 behaviors, central city and suburban teachers did not differ significantly in most of the pre- and post-scores. This indicates that central city and suburban teachers are not markedly different in their skill levels before taking the course and that they do not differ markedly in their ability to learn and demonstrate course skills. Also, these findings appear to refute the oftenheard statement that central city teachers are not as skilled in teaching reading as are suburban teachers.

There is the question of why central city teachers do more telling and less asking. This question is not related solely to Minicourse 18, but to a larger sphere of influence - possibly to cultural and/or economic differences.

EDUCATIONAL SIGNIFICANCE

The test data support the use of Minicourse 18 to teach critical instructional skills in the decoding portion of the reading process. Each of the skills included in the course was based upon a critical review of research in the area of decoding. Since many teachers did not demonstrate the skills in the pretapes, training appears to be necessary. (See Table 5 for supporting data; the reported means included many scores of 0.) Minicourse 18 resulted in significant changes in teacher behavior in 24 skills. Some of these changes in teacher behavior can be related directly to changes in the pupils' reading instruction. For example, there will be increased attention to letter characteristics, rather than solely to letter naming, when teaching letter recognition. And the course supports a move away from isolated sounding, toward presenting sound-letter relationships in words, or at least in larger letter units.

Minicourse 18 was proven effective with both central city and suburban teachers. Therefore, we recommend that the training be offered to a wide range of teachers.

If the pupil reading achievement effects, derived from the follow-up study of this course, prove to be significant also, then the course will have the strongest possible support in its claim to teach decoding skills. Since the study by Strickler (see comment on p. 3) demonstrated that

pupils in classes of teachers who had completed Minicourse 18 made significantly greater gains in reading than pupils in non-Minicourse 18 classes, we expect our findings to illustrate a similar relationship between teacher training and pupil outcomes.

APPENDICES

Pre-post lesson instructions

Lesson critique sheets and instructions

Minicourse Eighteen

Pre-Course Lesson Instructions

Plan a lesson of 30-minutes in length. It should include 5-7 minutes of activity on each of the four sections described below. It is understood that these sections probably would not be part of a regular, daily reading lesson. But, in order to cover a wide range of decoding skills, it is necessary to ask you to conduct this type of comprehensive learning experience.

Choose three children to work with you. Regardless of the grade level at which you work, plan to use pupils who represent about the middle level of your class in reading skill. Do <u>not</u> use the top or the bottom three pupils in your class. During the lesson it is hoped that some pupil errors will occur. Thus, it is important that you use children who are not expert readers. But they should have some reading skills.

The four parts of the lesson and the content to be included are:

1. Teach the pupils to recognize two of the following lower case letters: h, k, m, n, r, u.

2. Teach the letter-sound correspondences of the following letters and groups of letters: m, g, st, ch.

3. Teach the pupils to read the following words:

mat	rid	hide
cane	jumping	fat
hid	folded	ride
redo	can	

4. Have the pupils arrange these words into a sentence. Then use the sentence to build decoding skills: and, new, a, Ted, game, Don, played.

Minicourse Eighteen

Pre-Course Lesson Instructions

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The four parts of the lesson and the content to be included are:

1. Teach the pupils to recognize two of the following lower case letters: a, b, d, g, p, q.

2. Teach the letter-sound correspondences for the following letters and groups of letters: b, c, bl, sh.

3. Teach the pupils to decode the following words:

cat	kit	bite
mane	going	hat
bit	walked	kite
unbutton	man	

4. Have the pupils arrange these words into a sentence. Then use the sentence to build decoding skills: and, same, the, Mary, book, Bill, read.

Critiquer_____

Tape No._____

MINICOURSE 18

GRAPHEME (LETTER) RECOGNITION

	TEACHER		PUPIL	
	Tally	Total	Tally	Total
Matches letter with same letter				
Describes how two letters differ in shape				
Refers to letter sounds				

LETTERS IN WORDS

	Tally	Total
Shows letter for pupil to find		
Names letter for pupil to find		
Asks pupil to find same letter in words, without identifying letter		
Asks pupil to tell where letter is(beginning, middle,end)		

MINICOURSE 18 CRITIQUER INSTRUCTIONS

GRAPHEME (LETTER) RECOGNITION

Instructions for the critiquers are presented for each behavior.

Behavior 1: Matches letter with same letter.

Mark "Teacher" each time teacher matches like letters (b and b, n and n, etc.) by matching letter cards or charts, pointing, or drawing letter shape in air.

Mark "Pupil" each time teacher asks pupil and pupil performs, whether correctly or not.

Behavior 2: Describes how two letters differ in shape.

Mark "Teacher" each time teacher shows two different letters and tells how they differ in shape.

Mark "Pupil" each time teacher asks pupil to describe how two displayed letters differ in shape, and pupil performs.

Behavior 3: Shows letter for pupil to find.

Teacher displays letter and asks pupil to find in word. Tally for each new letter.

Behavior 4: Names letter for pupil to find.

Teacher names letter and asks pupil to find in word. Tally for each letter named.

Behavior 5: Asks pupil to find same letter in words, without identifying letter.

Teacher asks pupil to search for same letter in several words without identifying letter.

Behavior 6: Asks pupil to tell where letter is (beginning, middle, end).

Teacher asks where letter is in word, or what part of word letter is in. Tally each time pupil is asked to tell location or indicate it by pointing. Some possible words pupils may use are beginning, start, first, middle, end, last.

Critiquer_____

Tape No._____

MINICOURSE 18

NEGATIVE BEHAVIORS

	Tally	Total
Names letter		
Says "Sound letter makes" or "Sound letter says"		
Pronounces isolated letter sound		
Has pupil pronounce isolated letter sound		
Pronounces word with unnatural stress		

MINICOURSE 18 CRITIQUER INSTRUCTIONS

NEGATIVE BEHAVIORS

Instructions for the critiquers are presented for each behavior.

Behavior 1: Names letter.

Teacher calls letter by name.

Behavior 2: Says "Sound letter makes" or "Sound letter says".

Teacher uses those words.

Behavior 3: Pronounces isolated letter sound.

Teacher pronounces sound a letter stands for in isolation, rather than in a word. Tally also if several isolated sounds are pronounced and then blended into a word.

Behavior 4: Have pupil pronounce isolated letter sound.

Teacher asks pupil to pronounce the sound a letter stands for in isolation, or to pronounce several sounds in sequence.

Behavior 5: Pronounces word with unnatural stress.

In pronouncing a word, a teacher overemphasizes a part of the word. May be a single letter.

Critiquer_____

Tape No. _____

MINICOURSE 18

CONTEXTUAL CLUES IN DECODING

Check which set of words the teacher used:

1. and, same, the, Mary, book, Bill, read ☐
2. and, new, a, Ted, game, Don, played ☐
3. pillow, the, he, tear, on, saw, a ☐

	Teacher		Pupil	
	Tally	Total	Tally	Total
Arranges words into sentences				

	Teacher				Pupil	
	Ask	Total	Do	Total	Tally	Total
Substitutes word for sentence word						

	Teacher	
	Tally	Total
Asks why substituted word fits		

(Score rest of page for read or tear only.)

	Teacher			
	Ask	Total	Tell	Total
Asks or tells about more than one pronunciation of the word				
Asks or tells about more than one meaning of the word				

	Teacher	
	Tally	Total
Asks how to decide which word to use		

MINICOURSE 18 CRITIQUER INSTRUCTIONS

CONTEXTUAL CLUES IN DECODING

First check which of the three sets of words the teacher used.

Instructions are presented below for each behavior.

Behavior 1: Arranges words into sentence.

Tally each time teacher or pupil arranges words into sentence, even when the same words are arranged in different order.

Behavior 2: Substitutes words for sentence word.

Mark ask if teacher asks pupil to substitute word. Do not mark for redirection of the same task to another pupil if first pupil does not perform.

Mark do if teacher substitutes word.

Mark pupil if pupil substitutes word.

Behavior 3: Asks why substituted word fits.

Tally for each new question teacher asks about the selection of the substituted word.

(Tally Behaviors 4-6 for read or tear only.)

Behavior 4: Asks or tells about more than one pronunciation of the word.

Score ask if teacher asks about more than one pronunciation of the word.

Score tell if teacher tells that the word can be pronounced different ways. Score also if teacher pronounces the word both ways before pupils have done so.

Behavior 5: Asks or tells about more than one meaning of the word.

Score ask if teacher asks about more than one meaning of the word.

Score tell if teacher tells that the word has more than one meaning. Score also if teacher gives both meanings.

Behavior 6: Asks how to decide which meaning of the word to use.

Score for each new question teacher asks on how to select the right word. For example,

"How did you know the word was tear?" or "Why did you say read (present tense) instead of read (past tense)?"

Critiquer_____

Tape No. _____

MINICOURSE 18

GRAPHEME/PHONEME CORRESPONDENCE

	PART OF WORD LETTER IS IN			
	Tally Beginning	Tally Middle	Tally End	Total
Pronounces word to illustrate letter/sound correspondence				
Shows word to illustrate letter/sound correspondence				
Pronounces & shows word to illustrate letter/sound correspondence				
Writes word pupil suggested illustrating letter/sound correspondence				
Pronounces word pupils suggested illustrating letter/sound correspondence				
Writes & pronounces word suggested illustrating letter/sound correspondence				
(with c or g) Presents word examples of more than one sound correspondence for the letter				

(With c or g) Presents only one sound for the letter Yes_____ No _____

	Tally	Total
Has pupils discuss when c or g represents which sound		

MINICOURSE 18 CRITIQUER INSTRUCTIONS

GRAPHEME/PHONEME CORRESPONDENCE

Behavior 1: Pronounces word to illustrate letter/sound correspondence.

Pronounces word and (either before or after pronouncing word) calls attention to the sound represented by b, c, m, g, bl, sh, st, or ch. Do not tally if teacher pronounces isolated word, or shows the word.

Behavior 2: Shows word to illustrate letter/sound correspondence.

Shows word to illustrate a letter/sound correspondence, but does not pronounce it.

Behavior 3: Pronounces and shows word to illustrate letter/sound correspondence.

Teacher both pronounces and shows (simultaneously or in succession) a word to illustrate a letter/sound correspondence.

Behavior 4: Writes word pupil suggested illustrating letter/sound correspondence.

Writes word pupil suggested to illustrate a letter/sound correspondence, but does not pronounce it.

Behavior 5: Pronounces word pupil suggested illustrating letter/sound correspondence.

Pronounces word pupil suggested, but does not show written form of the word.

Behavior 6: Writes and pronounces word pupil suggested illustrating letter/sound correspondence.

Writes and pronounces word pupil suggested to illustrate a letter/sound correspondence.

Behavior 7: (With c or g) Presents word examples of more than one sound correspondence for the letter.

Presents (either simultaneously or in sequence) words illustrating the varied sound correspondences for c (as in cat and city) or g (as in go and gentle).

Behavior 8: (With c or g) Presents only one sound for the letter.

Presents word illustrating only one of the sound correspondences for c & g.

Behavior 9: Has pupil discuss how to decide when c or g represents which sound.

Asks how to decide when to use which sound; also tally if this discussion begins without teacher asking.

Critiquer_____

Tape No_____

MINICOURSE 18

LARGER LETTER UNITS

cat	Kit	bite
mane	going	hat
bit	walked	kite
unbutton	man	

mat	rid	hide
cane	jumping	fat
hid	folded	ride
redo	can	

Presents words in one of the two orders above. Yes_____ No_____

	TALLY	TOTAL
Presents similar spelling pattern words together.		
Asks pupil to identify similar pattern		
Presents contrasting spelling pattern words together		
Asks pupil to identify the contrasting word form		
Presents words with affixes sequentially.		
Discusses how affix changes word meaning.		

MINICOURSE 18 CRITIQUER INSTRUCTIONS

LARGER LETTER UNITS

Instructions for the critiquer are presented for each behavior.

Behavior 1: Presents words in one of two orders above.

Presents words from one of the boxes in the vertical or horizontal order in which they are arranged.

Behavior 2: Presents similar spelling pattern words together.

Presents simultaneously or sequentially words which have similar spelling patterns. Possible combinations are: cat/hat, bit/kit, bite/kite or mat/fat, hid/rid, hide/ride.

Behavior 2a: Asks pupils to identify similar pattern.

Asks pupil what is alike about the words presented in Behavior 2.

Behavior 3: Presents contrasting spelling pattern words together.

Presents simultaneously or sequentially words which have contrasting spelling patterns (as man/mane, bit/bite, kit/kite, can/cane, hid/hide, rid/ride).

Behavior 3a: Asks pupil to identify the contrasting word forms.

Asks pupil what is different about the words presented in Behavior 3.

Behavior 4: Presents words with affixes sequentially.

Presents simultaneously or sequentially two or more words with affixes (unbutton/going/walked or redo/jumping/folded).

Behavior 5: Discusses how affix changes word meaning.

Tells or asks how a suffix or prefix changes word meaning.

Critiquer _____

Tape No. _____

MINICOURSE 18

RESPONSE TO ERROR

	Tally	Total
Ignores error		
Moves to another pupil for answer		
Moves to fewer examples		
Moves to examples which differ more		
Presents word with letter at beginning (In locating ending or middle letter.)		
Returns to a previously used word		
Writes pupil response, compares with target word		
Uses a spelling pattern approach		
Has pupil read aloud or discuss incorrectly constructed sentences		
Moves to another homograph		
None of the above		

MINICOURSE 18 CRITIQUER INSTRUCTIONS

RESPONSE TO ERROR

For each pupil error, tally all of the responses which apply.

Behavior 1: Ignores error.

Teacher ignores error.

Behavior 2: Moves to another pupil for answer.

Tally each time teacher moves to a different pupil following an error.

Behavior 3: Moves to fewer examples.

Teacher removes one or more examples or substitutes fewer examples.

Behavior 4: Moves to examples which differ more.

Teacher removes one or more of the confusing examples and substitutes the same number of highly different (can be easily discriminated) forms.

Behavior 5: Presents word with letter at beginning.

Tally here if error was made on letter in ending or middle position, and teacher moved to another word with that letter in the initial position.

Behavior 6: Returns to a previously used word.

Teacher returns to a word which she has used earlier in the video-taped lesson:

Behavior 7: Writes pupil response, compares with target word.

Teacher writes the word the pupil said and has pupil compare it with the word he missed.

Behavior 8: Uses a spelling pattern approach.

Teacher writes a word or part of a word which contains a similar pattern to target word. For example, if target word is kit, teacher might write bit or sit for pupil to read. If word is kite, teacher might write kit or bite. If word has an affix, teacher writes another word with it attached and discusses its meaning.

Responses to Error (cont)

Behavior 9: Has pupil read aloud or discuss incorrectly constructed sentence.

Teacher has pupil read aloud or discuss the incorrectly constructed sentence.

Behavior 10: Moves to another homograph

If read or tear are read incorrectly, teacher presents another homograph (word with two pronunciations and two meanings, such as wind, bow).

Behavior 11: None of the above.

Teacher uses a method that is not listed above.

Critiquer_____

Tape No. _____

Minicourse 18

TEACHING STYLE

Teacher Tells	Teacher asks or makes it possible for pupils to find out or explain.
TALLIES	
TOTAL	

MINICOURSE 18 CRITIQUER INSTRUCTIONS

TEACHING STYLE

Tally Teacher Tells when the teacher gives information pertaining to the lesson. Also tally here if a question form is used to give information.

Examples:

"When 2 vowels go walking, the first one does the talking."
"Don't you see that that place could only be filled by a noun?"
Teacher lays out word cards and tells pupil how to group them.

Tally Teacher Asks, etc. when the teacher asks a question, makes a statement, or provides materials facilitating discovery or eliciting explanation.

Examples:

"What do you notice about these words?"
"I wish you'd tell us why you chose that word for that space."
Teacher lays out word cards and asks pupil to group them.

Critiquer_____

Tape No. _____

MINICOURSE 18

TEACHING FOR TRANSFER

	Tally	Total
Asks why or how pupil knew		
Provides new word differing from previously presented word in only one letter, asks pupil to read		
Provide new word containing pattern resembling previously presented word, asks pupil to read it		
Provides opportunity for pupil to read a word composed of previously presented parts		

MINICOURSE 18 CRITIQUER INSTRUCTIONS

TEACHING FOR TRANSFER

Instructions for the critiquer are presented for each behavior.

Behavior 1: Asks why, or how pupil knew.

Tally each time teacher asks why or questions how a pupil knew.

Behavior 2: Provides new word differing from previously presented word in only one letter, asks pupil to read it.

Tally when the word presented for pupil to pronounce differs from a preceding word in only one letter. For example, if hit had been previously presented, and then teacher asked pupil to read bit or hid.

Behavior 3: Provides new word containing pattern resembling previously presented word, asks pupil to read it.

Tally if teacher calls attention to the pattern in each word.

Behavior 4: Provides opportunity for pupil to read a word composed of previously presented parts.

For example teacher presents can and not, puts them together and asks pupil to read the word.